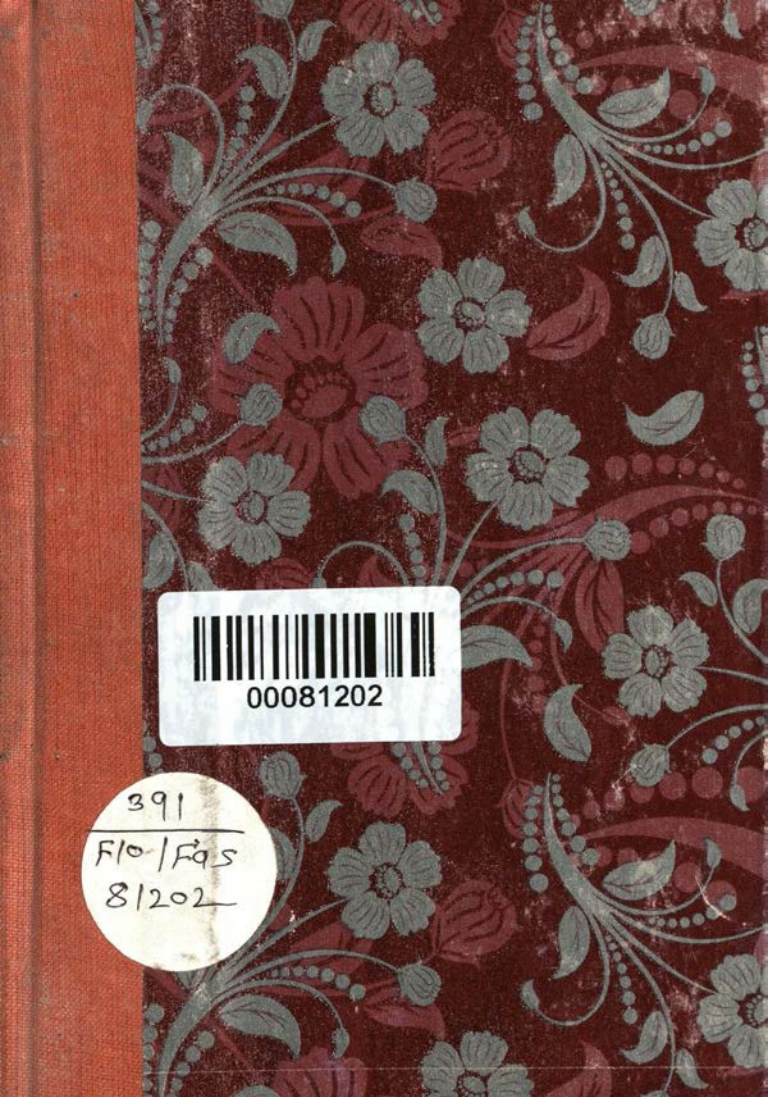
00081202
391
F10/F95
81202

Digitized with financial assistance from
Hemendra Kothari
on 06 November, 2019

FASHION IN DEFORMITY

NATURE SERIES

FASHION IN DEFORMITY

AS ILLUSTRATED IN THE

CUSTOMS OF BARBAROUS & CIVILISED RACES

81202

BY

WILLIAM HENRY FLOWER,

LL.D. F.R.S. F.R.C.S. P.Z.S. ETC.

HUNTERIAN PROFESSOR OF COMPARATIVE ANATOMY, AND CONSERVATOR OF THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

WITH ILLUSTRATIONS

London

MACMILLAN AND CO.

1881

00081202

Printed by R. & R. CLARK, *Edinburgh.*

PREFACE.

THE substance of the following essay was delivered as a lecture at the Royal Institution of Great Britain, on the evening of Friday, May 7, 1880, and subsequently published in the Proceedings of that body. Thanks are due to the Secretary and Managers for courteously allowing the use of the illustrations from their journal. Several new figures have now been added, and the text has been considerably augmented.

It was not until it was in the printer's hands in its present form that I became aware, through Professor T. S. Baynes, of the existence of a quaint old book, now very rare, having exactly the same object, and following much the same plan of arrangement. Though more suited by

its method of treatment and its choice of language to the taste of the seventeenth than that of the nineteenth century, the numerous references to ancient or mediæval authorities which it contains will make it useful to any one wishing to make an exhaustive study of the history of the subject, and who is able to discriminate the facts from the fables with which the former are liberally interspersed.

The full title of the work, which is very expressive of its contents and style, is—"*Anthropometamorphosis;* MAN TRANSFORM'D; or the ARTIFICIAL CHANGELING. Historically Presented in the mad and cruel Gallantry, Foolish Bravery, ridiculous Beauty, Filthy Finenesse, and loathsome Lovelinesse of most Nations, Fashioning and altering their Bodies from the mould intended by Nature. With a Vindication of the Regular Beauty and Honesty of Nature, and An Appendix of the Pedigree of the English Gallant. By

J. B. [John Bulwer], sirnamed the Chirosopher. London. Printed for *J. Hardisty*, at the Black spread Eagle in *Duck Lane*, 1650." 12mo.

An enlarged and illustrated edition, in small 4to, was published in 1653. Copies of both editions are in the British Museum Library.

LIST OF ILLUSTRATIONS.

PAGE

FIG. 1.—Hand of Chinese Ascetic, from Tylor's *Anthropology* 10

FIG. 2.—Australian Native, with bone nose-ornament 13

FIG. 3.—Tortoise-shell lip-ornament of the Moskito Indians. From Dampier 16

FIG. 4.—Botocudo Indian; from Bigg-Wither's *Pioneering in South Brazil* 17

FIG. 5.—Loobah Woman; from Schweinfurth's *Heart of Africa* 24

FIG. 6.—Upper front teeth altered according to fashion. 1, 2, 3, African; 4, 5, 6, Malay. (From specimens in the Museum of the Royal College of Surgeons) 29

FIG. 7.—Flat-headed Indian Child. (From Wilkes's *United States Exploring Expedition*) . . 36

FIG. 8.—Skulls artificially deformed according to similar fashions. A, from an ancient tomb at Tiflis; B, from Titicaca, Peru. C, from the

PAGE

Island of Mallicollo, New Hebrides. (Mus. Roy. Coll. Surgeons) 43

FIG. 9.—Deformed Skull of an Infant who had died during the process of flattening; from the Columbia River. (Mus. Roy. Coll. Surgeons) 46

FIG. 10.—Artificially flattened Skull of ancient Peruvian. (Mus. Roy. Coll. Surgeons) . 47

FIG. 11.—Posterior view of Cranium, deformed according to the fashion of flattening, with compensatory lateral widening. (Mus. Roy. Coll. Surgeons) 48

FIG. 12.—Posterior view of Cranium deformed according to the fashion of circular constriction and elongation. (Mus. Roy. Coll. Surgeons) . 49

FIG. 13.—Cranium of Koskeemo Indian, Vancouver Island, deformed by circular constriction and elongation. (Mus. Roy. Coll. Surgeons) . 52

FIG. 14.—Section of Natural Foot with the Bones, and a corresponding section of a Chinese Deformed Foot. The outline of the latter is dotted, and the bones shaded . . . 60

FIG. 15.—Chinese Woman's Foot, from the inside. From a photograph by Dr. R. A. Jamieson . 62

FIG. 16.—Sole of Chinese Woman's Foot. (Mus. Roy. Coll. Surgeons) 62

FIG. 17.—A. Natural form of the sole of the Foot, the great toe parallel to the axis of the whole

PAGE

foot. B, The same, with outline of ordinary fashionable boot. C, The modification of the form of the foot, necessarily produced by wearing such a boot 64

FIG. 18.—English feet deformed by wearing improperly-shaped shoes. From nature . 68

FIG. 19.—Modern Parisian Shoe, copied from an advertisement in the *Queen* Newspaper. The nearest European representative of the Chinese deformity depicted in Fig. 15, p. 62 . . 76

FIG. 20.—Torso of the Statue of Venus of Milo . 80

FIG. 21.— Paris Fashion, May 1880 . . . 80

FIG. 22.—Normal form of the Skeleton of the Chest. (Mus. Roy. Coll. Surgeons) 82

FIG. 23—Skeleton of the Chest of a Woman, twenty-three years of age, deformed by tight lacing; from Rüdinger's *Anatomie des Menschen* . 83

"What I here present you with is an Enditement framed against most of the Nations under the Sun; whereby they are arraigned at the tribunal of Nature, as guilty of High Treason, in Abasing, Counterfeiting, Defacing, and Clipping her Coin instampt with her Image and Superscription on the Body of Man."

J. BULWER, *Anthropometamorphosis.*

FASHION IN DEFORMITY.

THE propensity to *deform*, or alter from the natural form, some part of the body, is one which is common to human nature in every aspect in which we are acquainted with it, the most primitive and barbarous, and the most civilised and refined.

The alterations or deformities which it is proposed to consider in this essay, are those which are performed, not by isolated individuals, or with definite motives, but by considerable numbers of members of a community, simply in imitation of one another—in fact, according to *fashion* "that most inexorable tyrant to which the greater part of mankind are willing slaves."

Fashion is now often associated with change, but in less civilised conditions of society fashions of all sorts are more permanent than with us; and in all communities such fashions as those here treated of are, for obvious reasons, far less likely to be subject to the fluctuations of caprice than those affecting the dress only, which, even in Shakespeare's time, changed so often that "the fashion wears out more apparel than the man." Alterations once made in the form of the body cannot be discarded or modified in the lifetime of the individual, and therefore, as fashion is intrinsically imitative, such alterations have the strongest possible tendency to be reproduced generation after generation.

The origins of these fashions are mostly lost in obscurity, all attempts to solve them being little more than guesses. Some of them have become associated with religious or superstitious observances, and so have been spread and per-

petuated; some have been vaguely thought to be hygienic in motive; most have some relation to conventional standards of improved personal appearance; but whatever their origin, the desire to conform to common usage, and not to appear singular, is the prevailing motive which leads to their continuance. They are perpetuated by imitation, which, as Herbert Spencer says, may result from two widely divergent motives. It may be prompted by reverence for one imitated, or it may be prompted by the desire to assert equality with him.

Before treating of the subject in its application to the human body, it will be well to glance, in passing, at the fact that a precisely similar propensity has impelled man, at various ages of the world's history, and under various conditions of society, to interfere in the same manner with the natural conformation of many of the animals which have come under his influence through domestication.

The Hottentots, objecting to symmetry of growth in the horns of their cattle, twist them while young and pliant, so that ultimately they are made to assume various fantastic and unnatural directions. Sheep with multiple horns are produced in some parts of Africa, by splitting with a knife the budding horn of the young animal. Hotspur's exclamation: "What horse? a roan, a *crop-ear*, is it not?" points to a custom not yet extinct in England. Docking horses' tails —that is, cutting off about half the length, not of the hair only, but of the actual flesh and bone, and *nicking*, or dividing the tendons of the under side, so that the paralysed stump is always carried in an unnatural or "cocked" position—were common enough a generation ago, as seen in all equestrian pictures of the period, and are still occasionally practised. In spite of all warnings of common sense and experience, we continue, solely because it is the fashion, to torture and deform our horses'

mouths and necks with tight bearing-reins, which though only temporarily keeping the head in a constrained and unnatural, and therefore inelegant position, produce many permanent injuries.[1] Dogs may still be seen with the natural form of their ears and tails "improved" by mutilation.

Besides these and many other modifications of the form given by nature, practised upon the individual animal, selective breeding through many generations has succeeded in producing inherited structural changes, sometimes of very remarkable character. These have generally originated in some accidental, perhaps slight, peculiarity, which has been taken advantage of, perpetuated and increased. In this way the race of bull-dogs, with their shortened upper jaws, bandy legs and twisted tails, have been developed. The now fashionable "dachshund" is another instance. In

[1] See *Bits and Bearing-Reins*, by Edward Fordham Flower. London, 1879.

this category may also be placed polled and humped cattle, tailless cats of the Isle of Man and Singapore, lop-eared rabbits, tailless, crested, or other strange forms of fowls, pouter, tumbler, feather-legged, and other varieties of pigeons ; and the ugly double-tailed and prominent-eyed gold-fish which delight the Chinese. Thus the power which, when judiciously exercised, has led to the vast improvement seen in many domestic species over their wild progenitors, has also ministered to strange vagaries and caprices, in the production and perpetuation of monstrous forms.

To return to man, the most convenient classification of our subject will be one which is based upon the part of the body affected, and I will begin with the treatment of the hair and other appendages of the skin as the more superficial and comparatively trivial in its effects.

Here we are at once introduced to the domain

of fashion in her most potent sway. The facility with which hair lends itself to various methods of treatment has been a temptation too great to resist in all known conditions of civilisation. Innumerable variations of custom exist in different parts of the world, and marked changes in at least all more or less civilised communities have characterised successive epochs of history. Not only the length and method of arrangement, but even the colour of the hair, is changed in obedience to caprices of fashion. In many of the islands of the Western Pacific, the naturally jet black hair of the natives is converted into a tawny brown by the application of lime, obtained by burning the coral found so abundantly on their shores; and not many years since similiar means were employed for producing the same result among the ladies of Western Europe—a fact which considerably diminishes the value of an idea entertained by many ethnologists, that

community of custom is evidence of community of origin or of race.

Notwithstanding the painful and laborious nature of the process, when conducted with no better implements than flint knives, or pieces of splintered bone or shell, the custom of keeping the head closely shaved prevails extensively among savage nations. This, doubtless, tends to cleanliness, and perhaps comfort, in hot countries; but the fact that it is in many tribes practised only by the women and children, shows that these considerations are not those primarily engaged in its perpetuation. In some cases, as among the Fijians, while the heads of the women are commonly cropped or closely shaved, the men cultivate, at great expense of time and attention, a luxuriant and elaborately arranged mass of hair, exactly reversing the conditions met with in the most highly civilised nations.

In some regions of Africa it is considered

necessary to female beauty carefully to eradicate the eyebrows, special pincers for the purpose forming part of the appliances of the toilette; while the various methods of shaving and cutting the beard among men of all nations are too well known to require more than a passing notice. The treatment of finger nails, both as to colour and form, has also been subject to fashion; but the practical inconveniences attending the inordinate length to which these are permitted to grow in some parts of the east of Asia appear to have restricted the custom to a few localities. (See Fig. 1, p. 10.)

It may be objected to the introduction of this illustration here, that such nails should not be considered deformities, but rather as natural growth, and that to clip and mutilate them as we do is the departure from nature's intention. But this is not so. It is only by constant artificial care and protection that such an extraordinary and inconvenient length can be obtained. When the

hands are subjected to the normal amount of use, the nails break or wear away at their free ends

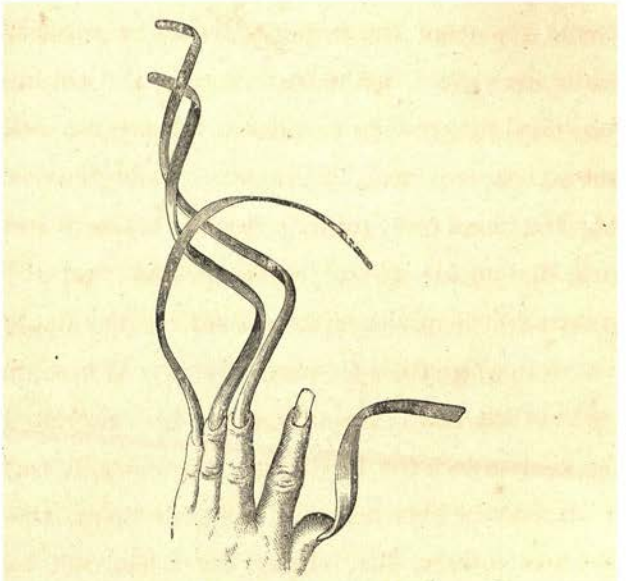

FIG. 1.—Hand of Chinese Ascetic, from Tylor's *Anthropology*.

in a ratio equal to their growth, as with the claws or hoofs of animals in a wild state.

The exceedingly widespread custom of tattooing[1]

[1] A word used by the natives of Tahiti, spelt *tattowing* by Cook, who gives a minute account of the method in which it is performed in that island. *First Voyage*, vol. ii. p. 191.

the skin, may also be alluded to here, as the result of the same propensity as that which produces the more serious deformations presently to be spoken of. The rudest form of the art was practised by the now extinct Tasmanians and some tribes of Australians, whose naked bodies showed linear or oval raised scars, arranged in a definite manner on the shoulders and breast, and produced by gashes inflicted with sharp stones, into which wood-ashes were rubbed, so as to allow of healing only under unfavourable conditions, leaving permanent large and elevated cicatrices, conspicuous from being of a lighter colour than the rest of the skin. From this it is a considerable step in decorative art to the elaborate and often beautiful patterns, wreaths, scrolls, spirals, zigzags, etc., sometimes confined to the face, and sometimes covering the whole body from head to foot, seen in the natives of many of the Polynesian Islands. These are permanently im-

pressed upon the skin, by the introduction of colouring matter, generally some kind of lamp black, by means of an instrument made of a piece of shell cut into a number of fine points, or a bundle of sharp needles. When the custom of the land demands that the surface to be treated thus is a large one, the process is not only very tedious, but entails an amount of suffering painful to think of. When completed it answers part at least of the purpose of dress with us, as an untattooed skin exhibited to society is looked upon much as an unclothed one would be in more civilised communities. The natural colour of the skin seems to have influenced the method and extent of tattooing, as in the black races it is limited to such scars as those spoken of above; which, variously arranged in lines or dots, become tribal distinctions among African negroes. In Europe tattooing on the same principle as that of the Polynesians, is confined almost exclusively to

sailors, among whom it is kept up obviously by imitation or fashion.

The nose, the lips, and the ears have in almost all races offered great temptations to be used as foundations for the display of ornament, some

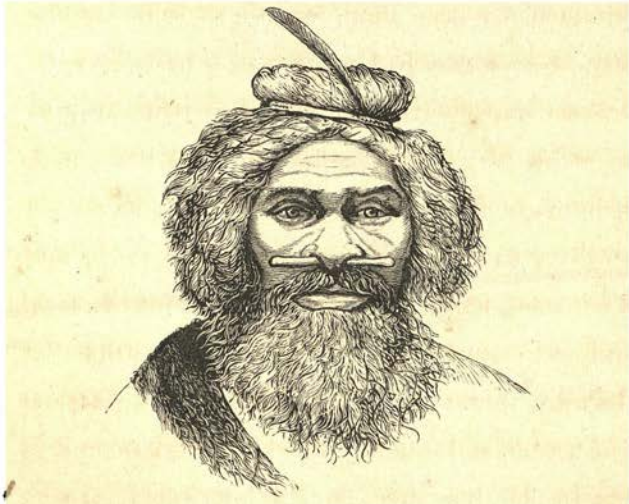

FIG. 2.—Australian Native, with bone nose-ornament.

process of boring, cutting, or alteration of form being necessary to render them fit for the purpose. When Captain Cook, exactly one hundred years

ago, was describing the naked savages of the east coast of Australia,[1] he says:—"Their principal ornament is the bone which they thrust through the cartilage which divides the nostrils from each other. What perversion of taste could make them think this a decoration, or what could prompt them, before they had worn it or seen it worn, to suffer the pain and inconvenience that must of necessity attend it, is perhaps beyond the power of human sagacity to determine. As this bone is as thick as a man's finger, and between five and six inches long, it reaches quite across the face, and so effectually stops up both the nostrils that they are forced to keep their mouths wide open for breath, and snuffle so when they attempt to speak that they are scarcely intelligible even to each other. Our seamen, with some humour, called it their spritsail-yard; and indeed it had so ludicrous an appearance, that till we were

[1] *First Voyage*, vol. ii. p. 633.

used to it we found it difficult to refrain from laughter."

Eight years later, on his visit to the north-west coast of America, Captain Cook found precisely the same custom prevailing among the natives of Prince William's Sound, whose mode of life was in most other respects quite dissimilar to that of the Australians, and who belong ethnologically to a totally different branch of the human race.

In 1681 Dampier[1] thus describes a custom which he found existing among the natives of the Corn Islands, off the Moskuito Coast, in Central America :—"They have a fashion to cut holes in the Lips of the Boys when they are young, close to their Chin, which they keep open with little Pegs till they are 14 or 15 years old; then they wear Beards in them, made of Turtle or Tortoise-shell, in the form you see in the Margin. (See Fig. 3, p. 16). The little notch at the upper end

[1] *Voyage Round the World*, ed. 1717, vol. i. p. 32.

they put in through the Lip, where it remains between the Teeth and the Lip; the under part

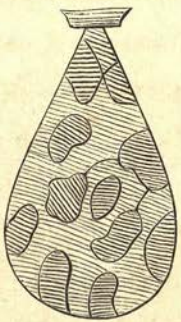

FIG. 3.—Tortoise-shell lip ornament of the Moskito Indians. From Dampier.

hangs down over their Chin. This they commonly wear all day, and when they sleep they take it out. They have likewise holes bored in their Ears, both Men and Women, when young, and by continual stretching them with great Pegs, they grow to be as big as a mill'd five Shilling Piece. Herein they wear pieces of Wood, cut very round and smooth, so that their Ear seems to be all wood, with a little Skin about it."

It is very remarkable that an almost exactly similar custom still prevails among a tribe of Indians inhabiting the southern part of Brazil

FIG. 4.—Botocudo Indian ; from Bigg-Wither's *Pioneering in South Brazil* (1878).

—the Botocudos, so called from a Portuguese word (*botoque*) meaning a plug or stopper. Among these people the lip-ornament consists of

a conical piece of hard and polished wood, frequently weighs a quarter of a pound, and drags down, elongates, and everts the lower lip, so as to expose the gums and teeth, in a manner which to our taste is hideous, but with them is considered an essential adjunct to an attractive and correct appearance.

In the extreme north of America, the Eskimo "pierce the lower lip under one or both corners of the mouth, and insert in each aperture a double-headed sleeve-button or dumb-bell-shaped labret, of bone, ivory, shell, stone, glass, or wood. The incision when first made is about the size of a quill, but as the aspirant for improved beauty grows older, the size of the orifice is enlarged until it reaches the width of half to three-quarters of an inch."[1] These operations appear to be practised only on the men, and are supposed to

[1] H. H. Bancroft, *Native Races of the Pacific States of North America*, vol. i. 1875.

possess some significance other than that of mere ornament. The first piercing of the lip, which is accompanied by some solemnity as a religious feast, is performed on approaching manhood.

But the people who, among the various American tribes, have carried these strange customs to the greatest excess are the Thlinkeets, who inhabit the south-eastern shores of Alaska.[1] "Here it is the women who, in piercing the nose and ears, and filling the apertures with bones, shells, sticks, pieces of copper, nails, or attaching thereto heavy pendants, which drag down the organs and pull the features out of place, appear to have taxed their inventive powers to the utmost, and with a success unsurpassed by any nation in the world, to produce a model of hideous beauty. This success is achieved in their wooden lip-ornament, the crowning glory of the

[1] See Bancroft, *op. cit.* vol. i., for numerous citations from original observers regarding these customs.

Thlinkeet matron, described by a multitude of eye-witnesses. In all female free-born Thlinkeet children a slit is made in the under lip, parallel with the mouth, and about half an inch below it. A copper wire, or a piece of shell or wood, is introduced into this, by which the wound is kept open and the aperture extended. By gradually introducing larger objects the required dimensions of the opening are produced. On attaining the age of maturity, a block of wood is inserted, usually oval or elliptical in shape, concave on the sides, and grooved like the wheel of a pulley on the edge in order to keep it in place. The dimensions of the block are from two to six inches in length, from one to four inches in width, and about half an inch thick round the edge, and it is highly polished. Old age has little terror in the eyes of a Thlinkeet belle; for larger lip-blocks are introduced as years advance, and each enlargement adds to the lady's social status, if

not to her facial charms. When the block is withdrawn, the lip drops down upon the chin like a piece of leather, displaying the teeth, and presenting altogether a ghastly spectacle. The privilege of wearing this ornament is not extended to female slaves."

In this method of adornment the North Americans are, however, rivalled, if not eclipsed, by the negroes of the heart of Africa.

"The BONGO women (says Schweinfurth[1]) delight in distinguishing themselves by an adornment which to our notion is nothing less than a hideous mutilation. As soon as a woman is married, the operation commences of extending her lower lip. This, at first only slightly bored, is widened by inserting into the orifice plugs of wood, gradually increasing in size, until at length the entire feature is enlarged to five or six times its original proportions. The plugs are cylindrical

[1] *Heart of Africa*, vol. i. p. 297.

in form, not less than an inch thick, and are exactly like the pegs of bone or wood worn by the women of Musgoo. By this means the lower lip is extended horizontally till it projects far beyond the upper, which is also bored and fitted with a copper plate or nail, and now and then by a little ring, and sometimes by a bit of straw, about as thick as a lucifer-match. Nor do they leave the nose intact; similar bits of straw are inserted into the edges of the nostrils, and I have seen as many as three of these on each side. A very favourite ornament for the cartilage between the nostrils is a copper ring, just like those that are placed in the noses of buffaloes and other beasts of burden for the purpose of rendering them more tractable. The greatest coquettes among the ladies wear a clasp, or cramp, at the corners of the mouth, as though they wanted to contract the orifice, and literally to put a curb upon its capabilities. These subsidiary ornaments are not,

however, found at all universally among the women, and it is rare to see them all at once upon a single individual ; the plug in the lower lip of the married women is alone a *sine quâ non*, serving, as it does, for an artificial distinction of race."

The slightest fold or projection of the skin furnishes an excuse for boring a hole, and inserting a plug or a ring. There are women in the country whose bodies are pierced in some way or other in little short of a hundred different places, and the men are often not far behind in the profusion with which this kind of adornment is carried out.

"The whole group of the Mittoo exhibits peculiarities by which it may be distinguished from its neighbours. The external adornment of the body, the costume, the ornaments, the mutilations which individuals undergo—in short, the general fashions—have all a distinctive character of

their own. The most remarkable is the revolting, because unnatural, manner in which the women pierce and distort their lips; they seem to vie

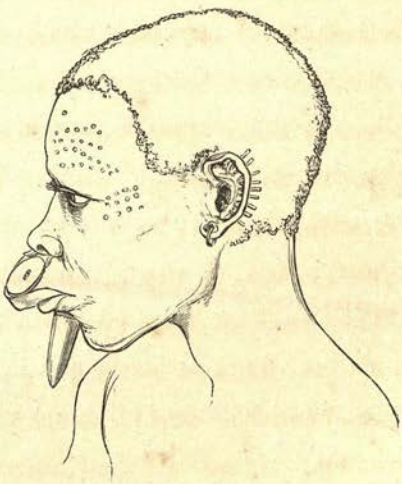

FIG. 5.—Loobah Woman; from Schweinfurth's *Heart of Africa*.

with each other in their mutilations; and their vanity in this respect, I believe, surpasses anything that may be found throughout Africa. Not satisfied with piercing the lower lip, they drag out the

upper lip as well for the sake of symmetry.[1] . . . Circular plates, nearly as large as a crown piece, made variously of quartz, of ivory, or of horn, are inserted into the lips that have been stretched by the growth of years, and then often bent in a position that is all but horizontal; and when the women want to drink they have to elevate the upper lip with their fingers, and to pour the draught into their mouth.

"Similar in shape is the decoration which is worn by the women of Maganya; but though it is round, it is a ring and not a flat plate; it is called 'pelele,' and has no object but to expand the upper lip. Some of the Mittoo women, especially the Loobah, not content with the circle or the ring, force a cone of polished quartz through the lips as though they had borrowed the idea from the rhinoceros. This fashion of using

[1] The mutilation of both lips was also observed by Rohlfs among the women of Kadje, in Segseg, between Lake Tsad and the Benwe.

quartz belemnites of more than two inches long, is in some instances adopted by the men."

The traveller who has been the eye-witness of such customs may well add, "Even amongst these uncultured children of nature, human pride crops up amongst the fetters of fashion, which, indeed, are fetters in the worst sense of the word; for fashion in the distant wilds of Africa tortures and harasses poor humanity as much as in the great prison of civilisation."

It seems, indeed, a strange phenomenon that in such different races, so far removed in locality, customs so singular—to our ideas so revolting and unnatural, and certainly so painful and inconvenient—should either have been perpetuated for an enormous lapse of time, if the supposition of a common origin be entertained, or else have developed themselves independently.

These are, however, only extreme or exaggerated cases of the almost universal custom of

making a permanent aperture through the lobe of the ear for the purpose of inserting some adventitious object by way of adornment, or even for utility, as in the man of the Island of Mangea, figured in Cook's Voyages, who carries a large knife through a hole in the lobe of the right ear. The New Zealanders of both sexes, when first visited by Europeans, all had holes bored through their ears, and enlarged by stretching, and which in their domestic economy answered the purpose of our pockets. Feathers, bones, sticks, talc chisels and bodkins, the nails and teeth of their deceased relations, the teeth of dogs, and in fact anything which they could get that they thought curious or valuable, were thrust through or suspended to them. The iron nails given them by the English sailors were at once conveyed to these miscellaneous receptacles.[1] The Zulus lately exhibited in London carried their cigars in the same man-

[1] *Cook's First Voyage*, vol. iii. p. 456.

ner. Mr. Wilfred Powell informs me that he met with a man on one of the islands near New Guinea, the holes in whose ears had been extended to such an extent that the lobes had been converted into great pendent rings of skin, through which he could easily pass his arms!

Among ourselves the custom of wearing ear-rings still survives, even in the highest grades of society, although it has been almost entirely abandoned by one-half of the community, and in the other the perforation is reduced to the smallest size compatible with the purpose of carrying the ornament suspended from it. Nose-rings are not now the fashion in Europe, but the extent to which they are admired in the East may be judged of by the frequency with which they are worn by the Ayahs or female servants who so often accompany English families returning from India.

The teeth, although allowed by the greater part of the world to retain their natural beauty and

usefulness of form, still offer a field for artificial alterations according to fashion, which has been made use of principally in two distinct regions of the world and by two distinct races. It is, of

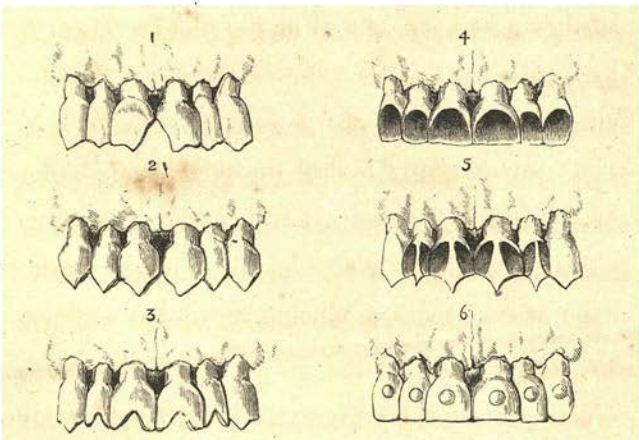

FIG. 6.— Upper front teeth altered according to fashion. 1, 2, 3, African; 4, 5, 6, Malay.

course, only the front teeth, and mainly the upper incisors, that are available for this purpose. Among various tribes of negroes of Equatorial Africa different fashions of modifying the natural form of these teeth prevail, specimens of which may

be found in any large collection of crania of these people. One of the simplest consists of chipping and filing away a large triangular piece from the lower and inner edge of each of the central incisors, so that a gap is produced in the middle of the row in front (Fig. 6, 1). Another fashion is to shape all the incisors into sharp points, by chipping off the corners, giving a very formidable crocodilian appearance to the jaws (2); and another is to file out either a single or a double notch in the cutting edge of each tooth, producing a serrated border to the whole series (3).

The Malays, however, excel the Africans both in the universality and in the fantastic variety of their supposed improvements upon nature. While the natural whiteness of the surface of these organs is always admired by us, and by most people, the Malays take the greatest pains to stain their teeth black, which they consider greatly adds to their beauty. White teeth are looked upon with perfect

disgust by the Dayaks of the neighbourhood of Sarawak. In addition to staining the teeth, filing the surface in some way or other is almost always resorted to. The nearly universal custom in Java is to remove the enamel from the front surface of the incisors, and often the canine teeth, hollowing out the surface, sometimes so deeply as to penetrate the pulp cavity (Fig. 6, 4). The cutting edges are also worn down to a level line with pumice-stone. Another and less common, though more elaborate fashion, is to point the teeth, and file out notches from the anterior surface of each side of the upper part of the crown, so as to leave a lozenge-shaped piece of enamel untouched ; as this receives the black stain less strongly than the parts from which the surface is removed, an ornamental pattern is produced (5). In Borneo a still more elaborate process is adopted, the front surface of each of the teeth is drilled near its centre with a small round hole, and into this a plug of brass

with a round or star-shaped knob is fixed (6). This is always kept bright and polished by the action of the lip over it, and is supposed to give a highly attractive appearance when the teeth are displayed. A skull with the teeth treated in this way may be seen in the Barnard Davis Collection, now in the Museum of the Royal College of Surgeons.

The Javan practice appears also to prevail in fashionable circles in the neighbouring parts of the mainland of Asia. The Siamese envoy who visited this country in 1880 had his upper incisor teeth treated like No. 4, Fig. 6, and one of his suite had them pointed.

Perhaps the strange custom, so frequently adopted by the natives of Australia, and of many islands of the Pacific, of knocking out one or more of the front teeth, might be mentioned here, but it is usually associated with some other idea than ornament or even mere fashion. In the first-

named country it constitutes part of the rites by which the youth are initiated into manhood, and in the Sandwich Islands it is performed as a propitiatory sacrifice to the spirits of the dead.

The projection forwards of the front upper teeth, which we think unbecoming, is admired by some races, and among the negro women of Senegal it is increased by artificial means employed in childhood.[1]

All these modifications of form of comparatively external and flexible parts are, however, trivial in their effects upon the body to those to be spoken of next, which induce permanent structural alterations both upon the bony framework and upon the important organs within.

Whatever might be the case with regard to the hair, the ears, the nose, and lips, or even the teeth, it might have been thought that the actual shape of the head, as determined by the solid skull, would not have been considered a subject to be

[1] Hamy, *Revue d'Anthropologie*, Jan. 1879, p. 22.

modified according to the fashion of the time and place. Such, however, is far from being the case. The custom of artificially changing the form of the head is one of the most ancient and widespread with which we are acquainted. It is far from being confined, as many suppose, to an obscure tribe of Indians on the north-west coast of America, but is found under various modifications at widely different parts of the earth's surface, and among people who can have had no intercourse with one another. It appears, in fact, to have originated independently in many quarters, from some natural impulse common to the human race. When it once became an established custom in any tribe, it was almost inevitable that it should continue, until put an end to by the destruction either of the tribe itself, or of its peculiar institutions, through the intervention of some superior force; for a standard of excellence in form, which could not be changed in those who possessed it,

was naturally followed by all who did not wish their children to run the risk of the social degradation which would follow the neglect of such a custom. "Failure properly to mould the cranium of her offspring gives to the Chinook[1] matron the reputation of a lazy and undutiful mother, and subjects the neglected children to the ridicule of their young companions, so despotic is fashion."[2] A traveller, who mentions that he occasionally saw Chinooks with heads of the ordinary shape, sickness or some other cause having prevented the usual distortion in infancy, adds that such individuals could never attain to any influence or rise to any dignity in their tribe, and were not unfrequently sold as slaves.[3]

It is related in the narrative of Commodore Wilkes' United States Exploring Expedition,[4]

[1] A tribe of Indians inhabiting the neighbourhood of the Columbia River, North America. [2] Bancroft, *op. cit.* vol. i. p. 238.

[3] T. K. Townsend, *Journey to the Columbia River*, p. 175.

[4] Vol. iv. p. 388.

that "at Niculuita Mr. Drayton obtained the drawing of a child's head, of the Wallawalla tribe (Fig. 7), that had just been released from its bandages, in order to secure its flattened shape.

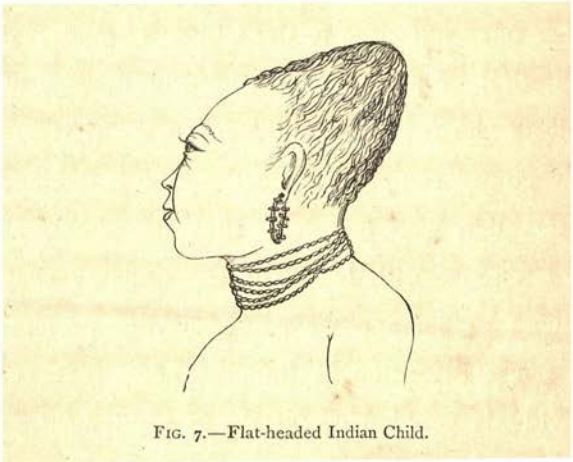

FIG. 7.—Flat-headed Indian Child.

Both the parents showed great delight at the success they had met with in effecting this distortion."

Endeavours have been made to trace the origin of this and many analogous customs to a desire to intensify or exaggerate any prevailing natural peculiarity of conformation. Thus races in which

the forehead is naturally low are supposed to have admired, and then to have artificially imitated, those individuals in which the peculiarity was most pronounced. But this assumption does not rest upon any strong basis of fact. The motives assigned by the native Peruvians for their interference with the natural form of their children's heads, as reported by the early Spanish historians, were very various. Some said that it contributed to health, and enabled them to bear greater burdens; others that it increased the ferocity of the countenance in war.[1] These were all probably excuses for a blind adherence to custom or the imperious demands of fashion.

Many of the less severe alterations of the form to which the head is subjected are undesigned, resulting only from the mode in which the child is carried or dressed during infancy. Thus habitually carrying the child on one arm

[1] Morton's *Crania Americana*, p. 116.

appears to produce an obliquity in the form of the skull which is retained to a greater or less degree all through life. The practice followed by nomadic people of carrying their infants fastened to stiff pillows or boards, commonly causes a flattening of the occiput; and the custom of dressing the child's head with tightly fitting bandages, still common in many parts of the Continent, and even used in England within the memory of living people, produces an elongated and laterally constricted form.[1] In France this is well known, and so common is it in the neighbourhood of Toulouse, that a special form of head produced in this manner is known as the "*déformation Toulousaine.*"

Of the ancient notices of the custom of pur-

[1] A gentleman of advanced age lately showed me a circular depression round the upper part of his head, which he believed had been produced in this manner, as the custom was still prevailing at the time of his birth in the district of Norfolk, of which he was a native.

posely altering the form of the head, the most explicit is that of *Hippocrates*, who in his treatise *De Aëris, Aquis et Locis*, written about 400 B. C., says,[1] speaking of the people near the boundary of Europe and Asia, near the *Palus Mœotis* (Sea of Azoff) :—" I will pass over the smaller differences among the nations, but will now treat of such as are great either from nature or custom ; and first, concerning the *Macrocephali.* There is no other race of men which have heads in the least resembling theirs. At first, usage was the principal cause of the length of their head, but now nature co-operates with usage. They think those the most noble who have the longest heads. It is thus with regard to the usage : immediately after the child is born, and while its head is still tender, they fashion it with their hands, and constrain it to assume a lengthened shape by applying bandages and other suitable

[1] Sydenham Society's edition, by Dr. Adam, vol. i. p. 270.

contrivances, whereby the spherical form of the head is destroyed, and it is made to increase in length. Thus, at first, usage operated, so that this constitution was the result of force; but in the course of time it was formed naturally, so that usage had nothing to do with it."

Here, Hippocrates appears to have satisfied himself upon a point which is still discussed with great interest, and still not cleared up—the possibility of transmission by inheritance of artificially produced deformity. Some facts seem to show that such an occurrence may take place occasionally, but there is an immense body of evidence against its being habitual.

Herodotus also alludes to the same custom as do, at later dates, Strabo, Pliny, Pomponius Mela and others, though assigning different localities to the nations or tribes to which they refer, and also indicating variations of form in their peculiar cranial characteristics.

Recent archæological discoveries fully bear out these statements. Heads deformed in various fashions, but chiefly of the constricted, elongated shape, have been found in great numbers in ancient tombs, in the very region indicated by Herodotus. They have been found near Tiflis, where as many as 150 were discovered at one time, and at other places in the Caucasus, generally in rock tombs; also in the Crimea, and at different localities along the course of the Danube; in Hungary, Silesia, in the South of Germany, Switzerland, and even in France and Belgium. The people who have left such undoubted evidence of the practice of deforming their heads have been supposed by various authors to have been Avars, Huns, Tartars, or other Mongolian invaders of Europe; but later French authors who have discussed this subject are inclined to assign them to an Aryan race, who, under the name of Cimmerians, spread west-

ward over the part of Europe in which their remains are now found, in the seventh or eighth century before our era. Whether the French habit, scarcely yet extinct, of tightly bandaging the heads of infants, is derived from these people, or is of independent origin, it is impossible to say.

There is no unequivocal proof that the custom of designedly altering the form of the head ever existed in this country, but the singular shape of a skull found in 1853 in a Saxon grave at West Harnham, in Wilts, figured and described in Davis's and Thurnam's *Crania Britannica*, and now in the Museum of the College of Surgeons, is apparently due to such a cause.

In Africa and Australia no analogous customs have been shown to exist, but in many parts of Asia and Polynesia, deformations, though usually only confined to flattening of the occiput, are common. Though often undesigned, they are done purposely, I am informed by Mr. H. B.

Low, by the Dayaks, in the neighbourhood of Sarawak. Sometimes, in the islands of the Pacific, the head of the new-born infant is merely pressed by the hands into the desired form, in which case it generally soon recovers that which

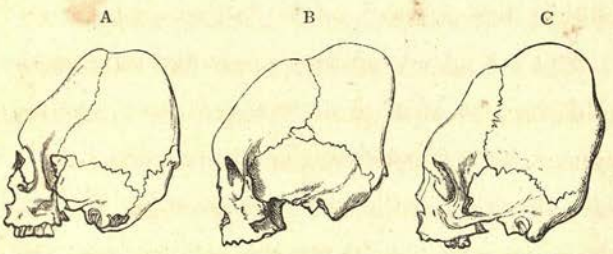

FIG. 8.—Skulls artificially deformed according to similar fashions. A, from an ancient tomb at Tiflis; B, from Titicaca, Peru. C, from the island of Mallicollo, New Hebrides. (From specimens in the Museum of the Royal College of Surgeons.)

nature intended for it. In one island alone, Mallicollo, in the New Hebrides, the practice of permanently depressing the forehead is almost universal, and skulls are even found constricted and elongated exactly after the manner of the Aymaras of ancient Peru. The extraordinary flatness of the forehead, by which the inhabitants

of this island differ from those of all around, was noticed by Captain Cook and the two Forsters, who accompanied him as naturalists, but they were not able to ascertain whether it was a natural conformation or due to art. It is only within the last few years that crania have been sent to England which abundantly confirm the old description of the great navigator, and also prove the artificial character of the deformity.

Though the Chinese usually allow the head to assume its natural form, confining their attentions to the feet, a certain class of mendicant devotees appear to have succeeded to a remarkable extent in getting their skulls elongated into a conical form, if the figure in Picart's *Histoire des Religions*, vol. iv. plate 131, is to be trusted.

America is, however, or rather has been, the headquarters of all these fantastic practices, and especially along the western coast, and mainly in two regions, near the mouth of the Columbia

River in the north, and in Peru in the south. The practice also existed among the Indians of the southern parts of what are now the United States, and among the Caribs of the West India Islands. In ancient Peru, before the time of the Spanish conquest, it was almost universal. In an edict of the ecclesiastical authorities of Lima, issued in 1585, three distinct forms of deformation are mentioned. Notwithstanding the severe penalties imposed by this edict upon parents persisting in the practice, the custom was so difficult to eradicate that another injunction against it was published by the Government as late as 1752.

In the West Indies, and the greater part of North America, the custom has become extinct with the people who used it; but the Chinook Indians, of the neighbourhood of the Columbia River, and the natives of Vancouver Island, continue it to the present day; and this is the last

stronghold of this strange fashion, though under the influence of European example and discouragement it is rapidly dying out. Here the various methods of deforming the head, and their

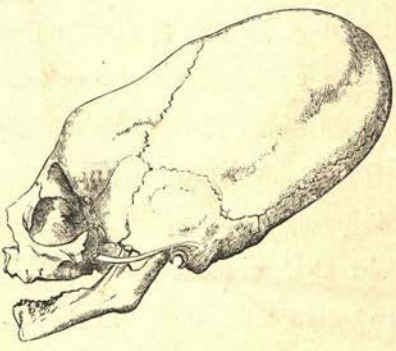

FIG. 9.—Deformed Skull of an Infant who had died during the process of flattening; from the Columbia River. (Mus. Roy. Coll. Surgeons.)

effects, have been studied and described by numerous travellers. The process commences immediately after the birth of the child, and is continued for a period of from eight to twelve months, by which time the head has permanently assumed the required form, although during sub-

sequent growth it may partly regain its proper shape. "It might be supposed," observes Mr.

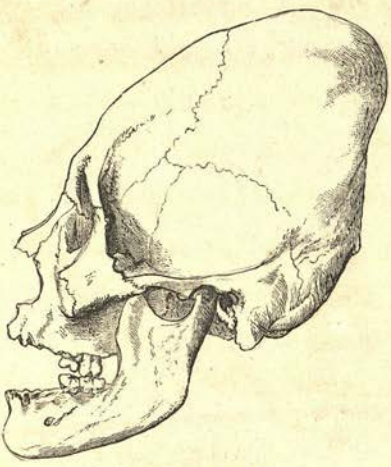

FIG. 10.—Artificially flattened Skull of ancient Peruvian. (Mus. Roy. Coll. Surgeons.)

Kane, who had large opportunities of watching the process, "that the operation would be attended with great suffering; but I never heard the infants crying or moaning, although I have seen their eyes seemingly starting out of the sockets from the great pressure; but, on the contrary, when

the thongs were loosened and the pads removed, I have noticed them cry until they were replaced. From the apparent dulness of the children whilst under the pressure, I should imagine that a state

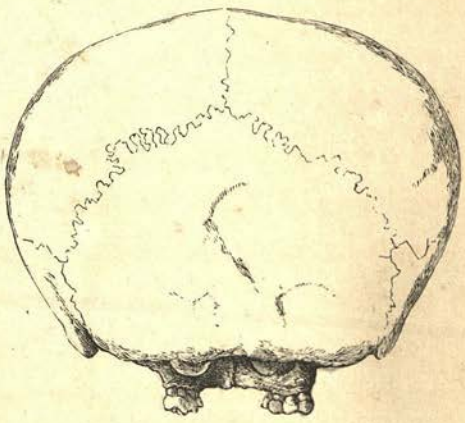

FIG. 11.—Posterior view of Cranium, deformed according to the fashion of flattening, with compensatory lateral widening. (Mus. Roy. Coll. Surgeons.)

of torpor or insensibility is induced, and that the return to consciousness occasioned by its removal must be naturally followed by a sense of pain."

Nearly if not all the different fashions in cranial deformity, observed in various parts of the

world, are found associated within a very small compass in British Columbia and Washington Territory, each small tribe having often a particular method of its own. Many attempts have

FIG. 12.—Posterior view of Cranium deformed according to the fashion of circular constriction and elongation. (Mus. Roy. Coll. Surgeons.)

been made to classify these various deformities; but as they mostly pass insensibly into one another, and vary according as the intention has been carried out with a greater or less degree of

perseverance and skill, it is not easy to do so. Besides the simple occipital and the simple frontal compressions, all the others may be grouped into two principal divisions. First (Figs. 9, 10, and 11), that in which the skull is flattened between boards or pads made (among the Indians of the Columbia river) of deer-skin stuffed with frayed cedar bark or moss, applied to the forehead and back of the head; and as there is no lateral pressure, it bulges out sideways, as seen in Fig. 11, to compensate for the shortening in the opposite direction. This form is very often unsymmetrical, as the flattening boards, applied to a nearly spherical surface, naturally incline a little to one side or the other; and when this once commences, unless great care is used, it must increase until the very curious oblique flattening so common in these skulls is produced. This is the ordinary form of deformity among the Chinook Indians of the Columbia River, commonly called "Flat-

heads." It is also most frequent among the Quichuas of Peru.

The methods by which this particular kind of deformity was produced varied in detail in different tribes. One of the most effective is thus described by Mr. Townsend :—"The Wallamet Indians place the infant, soon after birth, upon a board, to the edges of which are attached little loops of hempen cord or leather; and other similar cords are passed across and back, in a zigzag manner through these loops, enclosing the child and binding it firmly down. To the upper edge of this board, in which is a depression to receive the back part of the head, another smaller one is attached by hinges of leather, and made to lie obliquely upon the forehead, the force of the pressure being regulated by several strings attached to its edge, which are passed through holes in the board upon which the infant is lying, and secured there."

81202

The second form of deformity (Figs. 8, 12, and 13) is produced by constricting bandages of deer's hide, or other similar material, encircling the head behind the ears, usually passing below the occiput

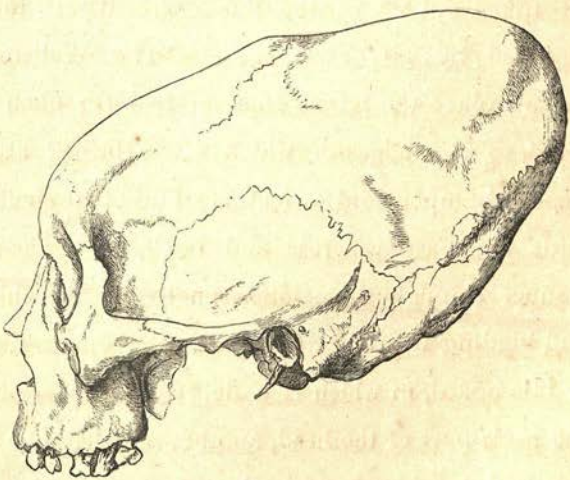

FIG. 13.—Cranium of Koskeemo Indian, Vancouver Island, deformed by circular constriction and elongation. (Mus. Roy. Coll. Surgeons.)

behind, and across the forehead, and again across the vertex, behind the coronal suture, producing a circular depression. The result is an elongation of the head, but with no lateral bulging and with

no deviation from bilateral symmetry. This was the form adopted, with trifling modifications, by the *Macrocephali* of Herodotus, by the Aymara Indians of Peru, and by certain tribes, as the Koskeemos, of Vancouver Island. The "*déformation Toulousaine*" is a variation of the same form. Another modification is thus described in Wilson's *Prehistoric Man*:—"The Newatees, a warlike tribe on the north end of Vancouver's Island, give a conical shape to the head by means of a thong of deer's skin, padded with the inner bark of the cedar-tree frayed until it assumes the consistency of very soft tow. This forms a cord about the thickness of a man's thumb, which is wound round the infant's head, compressing it gradually into a uniformly tapering cone. The effect of this singular form of head is still further increased by the fashion of gathering the hair into a knot on the crown of the head." A "sugar-loaf" form of skull has also been found in an

ancient grave in France, at Voiteur in the Department of Jura.

The brain, of course, has to accommodate itself to the altered shape of the osseous case which contains it; and the question naturally arises, whether the important functions belonging to this organ are in any way impaired or affected by its change of form. All observations upon the living Indians who have been subjected to it concur in showing that if any modification in mental power is produced, it must be of a very inconsiderable kind, as no marked difference has been detected between them and the people of neighbouring tribes which have not adopted the fashion. Men whose heads have been deformed to an extraordinary extent, as Concomly, a Chinook chief, whose skull is preserved in the museum at Haslar Hospital, have often risen by their own abilities to considerable local eminence; and the fact that the relative social position of the chiefs, in whose

families the heads are always deformed, and the slaves on whom it is never permitted, is constantly maintained, proves that the former evince no decided inferiority in intelligence or energy.

Of the Newatees, mentioned above, Wilson says, "The process seems neither to affect the intellect nor the courage of the people, who are remarkable for cunning, as well as fierce daring, and are the terror of surrounding tribes."

Of the Mallicollese it is expressly stated by George Forster that "they are the most intelligent people we have ever met with in the South Seas; they understood our signs and gestures as if they had been long acquainted with them, and in a few minutes taught us a great number of words. . . . Thus what they wanted in personal attraction they made up in acuteness of understanding." Cook gives some remarkable instances of the honesty of the "ape-like nation," as he calls them.

Although the American Indians,—living a healthy life in their native wilds, and under physical conditions which cause all bodily lesions to occasion far less constitutional or local disturbance than is the case with people living under the artificial conditions and the accumulated predisposition to disease which civilisation entails,—thus appear to suffer little, if at all, from this unnatural treatment, it seems to be otherwise with the French, on whom its effects have been watched by medical observers more closely than it can have been on the savages in America. "Dr. Foville proves, by positive and numerous facts, that the most constant and the most frequent effects of this deformation, though only carried to a small degree, are headaches, deafnesses, cerebral congestions, meningitis, cerebritis, and epilepsy; that idiocy or madness often terminates this series of evils; and that the asylums for lunatics and imbeciles receive a large number of their inmates

from among these unhappy people."[1] For this reason the French physicians have exerted all their influence, and with great success, to introduce a more rational system in the districts where the practice of compressing the heads of infants prevailed.[2]

We may now pass from the head to the extremities, but there will be little to say about the hands, for the artificial deformities practised upon those members are confined to chopping off one or more of the fingers, generally of the left hand, and usually not so much in obedience merely to fashion, as part of an initiatory ceremony, or an expiation or oblation to some superior, or to some departed person. Such practices are common

[1] Gosse, *Essai sur les Déformations artificielles du Crane*, *Annales d'Hygiene*, 2 ser. tom. iv. p. 8.

[2] Ample references to the literature of artificially produced deformities of the cranium are given by Prof. Rolleston, in Greenwell's *British Barrows* (1877), p. 596. To these may be added, Lenhossek, *Des Déformations artificielles du Crane*, etc., Budapest, 1878; and Topinard, *Des Déformations ethniques du Crane*, in the *Revue d'Anthropologie*, July 1879, p. 496.

among the American Indians, some tribes of Africans, the Australians, and Polynesians, especially those greatest of all slaves of ceremonial, the Fijians, where the amputation of fingers is demanded to appease an angry chieftain, or voluntarily performed as a token of affection on the occasion of the death of a relative.

But *per contra*, the feet have suffered more, and altogether with more serious results to general health and comfort, from simple conformity to pernicious customs, than any other part of the body. And on this subject, instead of relating the unaccountable caprices of the savage, we have to speak only of people who have already advanced to a tolerably high grade of civilisation, and to include all those who are at the present time foremost in the ranks of intellectual culture.

The most extreme instance of modification of the size and form of the foot in obedience to fashion, is the well-known case of the Chinese

women, not entirely confined to the highest classes, but in some districts pervading all grades of society alike. The deformity is produced by applying tight bandages round the feet of the girls when about five years old. The bandages are specially manufactured, Miss Norwood [1] tells us, and are about two inches wide and two yards long for the first year, five yards long for subsequent years. The end of the strip is laid on the inside of the foot at the instep, then carried over the toes, under the foot and round the heel, the toes being thus drawn towards and across the sole, while a bulge is produced in the instep and a deep indentation in the sole. Successive layers of bandage are wound round the foot until the strip is all used, and the end is then sewn tightly down. After a month the foot is put in hot water to soak some time; then the bandage is carefully unwound. Notwithstanding the powdered alum and other

[1] American missionary at Swatow, *Times*, Sept. 2, 1880.

appliances that are used to prevent it, the surface of the foot is generally found to be ulcerated, and much of the skin and sometimes part of the flesh

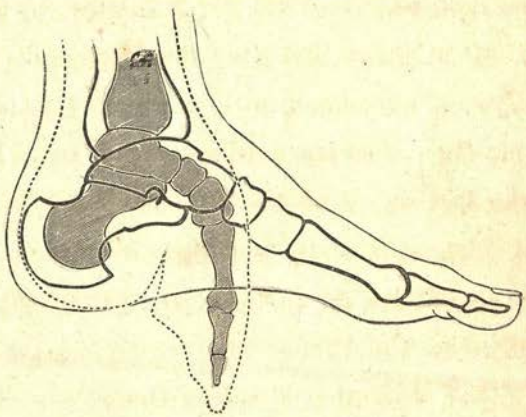

FIG. 14.—Section of Natural Foot with the Bones, and a corresponding section of a Chinese Deformed Foot. The outline of the latter is dotted, and the bones shaded.

of the sole, and even one or two of the toes, may come off with the bandages, in which case the woman afterwards feels repaid by the smallness and more delicate appearance of her feet. Each time the bandage is taken off, the foot is kneaded to make the joints more flexible, and is then

bound up again as quickly as possible with a fresh bandage, which is drawn up more tightly. During the first year the pain is so intense that the sufferer can do nothing but lie and cry and moan. For about two years the foot aches continually, and is subject to a constant pain like the pricking of sharp needles. With continued rigorous binding it ultimately loses its sensibility, the muscles, nerves, and vessels are all wasted, the bones are altered in their relative position to one another, and the whole limb is reduced permanently to a stunted or atrophied condition.

The alterations produced in the form of the foot are—1, bending the four outer toes under the sole of the foot, so that the first or great toe alone retains its normal position, and a narrow point is produced in front: 2, compressing the roots of the toes and the heel downwards and towards one another so as greatly to shorten the foot, and produce a deep transverse fold in the middle

of the sole (Fig. 16). The whole has now the appearance of the hoof of some animal rather than a human foot, and affords a very inefficient organ of support, as the peculiar tottering gait of

FIG. 15.—Chinese Woman's Foot, from the inside. A photograph by Dr. R. A. Jamieson.[1]

FIG. 16.—Sole of Chinese Woman's Foot.

those possessing it clearly shows. When once formed, the "golden lily," as the Chinese lady

[1] Dr. Jamieson says, "The fashionable length for a Chinese lady's foot is between 3½ and 4 inches, but comparatively few parents succeed in arresting growth so completely. The above, taken from a woman in the middle station of life, measures almost exactly 5 inches."

calls her delicate little foot, can never recover its original shape.

But strange as this custom seems to us, it is only a slight step in excess of what the majority of people in Europe subject themselves and their children to. From personal observation of a large number of feet of persons of all ages and of all classes of society in our own country, I do not hesitate to say that there are very few, if any, to be met with that do not, in some degree, bear evidence of having been subjected to a compressing influence more or less injurious. Let any one take the trouble to inquire into what a foot ought to be. For external form look at any of the antique models,—the nude Hercules Farnese or the sandalled Apollo Belvidere; watch the beautiful freedom of motion in the wide-spreading toes of an infant; consider the wonderful mechanical contrivances for combining

strength with mobility, firmness with flexibility; the numerous bones, articulations, ligaments; the great toe, with seven special muscles to give it

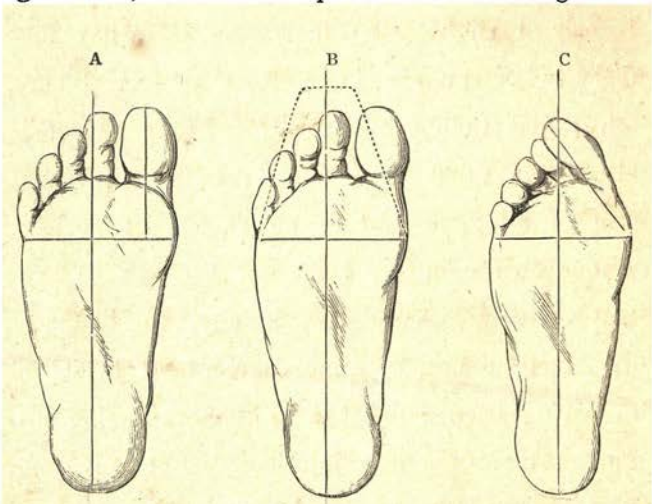

FIG. 17.—A. Natural form of the sole of the Foot, the great toe parallel to the axis of the whole foot. B. The same, with outline of ordinary fashionable boot. C. The modification of the form of the foot, necessarily produced by wearing such a boot.

that versatility of motion which was intended that it should possess;—and then see what a miserable, stiffened, distorted thing is this same foot, when it has been submitted for a number

of years to the "improving" process to which our civilisation condemns it. The toes all squeezed and flattened against each other; the great toe no longer in its normal position, but turned outwards, pressing so upon the others that one or more of them frequently has to find room for itself either above or under its fellows; the joints all rigid, the muscles atrophied and powerless; the finely formed arch broken down; everything which is beautiful and excellent in the human foot destroyed,—to say nothing of the more serious evils which so generally follow—corns, bunions, in-growing nails, and all their attendant miseries.

Now, the cause of this will be perfectly obvious to any one who compares the form of the natural foot with the last upon which the shoemaker makes the covering for that foot. This, in the words of the late Mr. Dowie, "is shaped in front like a wedge, the thick part

or instep rising in a ridge from the centre or middle toe, instead of the great toe, as in the foot, slanting off to both sides from the middle, terminating at each side and in front like a wedge; that for the inside or great toe being similar to that for the outside or little toe, as if the human foot had the great toe in the middle and a little toe at each side, like the foot of a goose!" The great error in all boots and shoes made upon the system now in vogue in all parts of the civilised world lies in this method of construction upon a principle of bi-lateral symmetry. A straight line drawn along the sole from the middle of the toe to the heel will divide a fashionable boot into two equal and similar parts, a small allowance being made at the middle part, or "waist," for the difference between right and left foot. Whether the toe is made broad or narrow, it is always equally inclined at the sides towards the middle line;

whereas in the foot there is no such symmetry. The first or inner toe is much larger than either of the others, and its direction is perfectly parallel with the long axis of the foot. The second toe may be a little longer than the first, as generally represented in Grecian art, but it is more frequently shorter ;[1] the others rapidly decrease in size (Fig. 17, A). The modification which must have taken place in the form of the foot and direction of the toes before a boot of the ordinary form can be worn with any approach to

[1] It seems to be a very common idea with artists and sculptors, as well as anatomists, that the second toe ought to be longer than the first in a well-proportioned human foot, and so it is conventionally represented in art. The idea is derived from the Greek canon, which in its turn was copied from the Egyptian, and probably originally derived from the negro. It certainly does not represent what is most usual in our race and time. Among hundreds of bare and therefore undeformed feet of children I lately examined in Perthshire, I was not able to find one in which the second toe was the longest. As in all apes—in fact, in all other animals—the first toe is considerably shorter than the second, a long great toe is a specially human attribute, and instead of being despised by artists, it should be looked upon as a mark of elevation in the scale of organised beings.

ease is shown at Fig. 17, C. (p. 64). Often it will happen that the deformity has not advanced to so great an extent, but every one who has had the

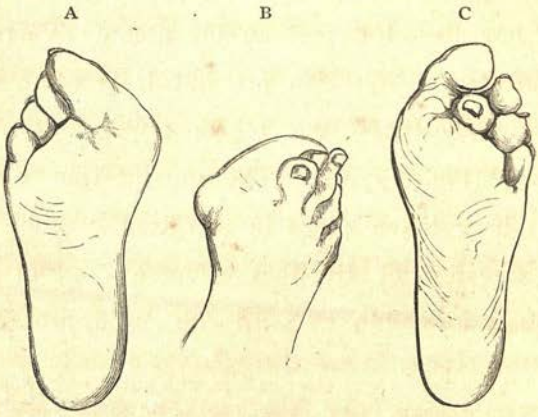

FIG. 18.—English feet deformed by wearing improperly-shaped shoes. From nature.

opportunity of examining many feet, especially among the poorer classes, must have met with many far worse. The two figured (Fig. 18), one (C) from a labouring man, the other (A and B) from a working woman, both patients at a London

hospital, are very ordinary examples of the European artificial deformity of the foot, and afford good subjects for comparison with the Chinese foot (Fig. 16). It not unfrequently happens that the dislocation of the great toe is carried so far that it becomes placed almost at a right angle to the long axis of the foot, lying across the roots of the other toes.

In walking, and especially running, the action of the foot is as follows:—The heel is first lifted from the ground, and the weight of the body gradually transferred through the middle to the anterior end of the foot, and the final push or impulse given with the great toe. It is necessary then that these parts should all be in a straight line with one another. Any deflection, especially of the great toe, from its proper direction, or any weakening of its bones, ligaments, or muscles, must be detrimental to the proper use of the foot in progression. Against this it will perhaps be

urged that there are many fairly good walkers and runners among us whose great toes have been considerably changed from the normal position in consequence of wearing pointed boots while young. This may be perfectly true, but it is also well known that several persons, as the late Miss Biffin, and an artist familiar to all frequenters of the Antwerp picture gallery, have acquired considerable facility in the use of the brush, though possessing neither hands nor arms, the one painting only from the shoulder, and the other with the feet. The compensating power of nature is very wonderful, and when one part is absent or crippled, other means are found of doing its work, but always at a disadvantage as compared with those best fitted for the duty.

The loss of elasticity and motion in the joints of the foot, as well as the wrong direction acquired by the great toe, are in most persons seriously detrimental to free and easy progression,

and can only be compensated for by a great expenditure of muscular power in other parts of the body, applied in a disadvantageous manner. The labouring men of this country, who from their childhood wear heavy, stiff, and badly-shaped boots, and in whom, consequently, the play of the ankle, feet, and toes is lost, have generally small and shapeless legs and wasted calves, and walk as if on stilts, with a swinging motion from the hips. Our infantry soldiers also suffer much in the same manner, the regulation boots in use in the service being exceedingly ill-adapted for the development of the feet. Much injury to the general health—the necessary consequence of any impediment to freedom of bodily exercise—must also be attributed to this cause. Since some of the leading shoemakers have ventured to deviate a little from the conventional shape, those persons who can afford to be specially fitted are better off as a rule than the

majority of poorer people, who, although caring less for appearance, and being more dependent for their livelihood upon the physical welfare of their bodies, are obliged to wear ready-made shoes of the form that an inexorable custom has prescribed.

The changes that a foot has to undergo in order to adapt itself to the ordinary shape of a shoe could probably not be effected unless commenced at an early period, when it is young and capable of being gradually moulded into the required form.

The English mother or nurse who thrusts the tender feet of a young child into stiff, unyielding pointed shoes or boots, often regardless of the essential difference in form of right and left, at a time when freedom is especially needed for their proper growth and development, is the exact counterpart of the Chinook Indian woman, applying her bandages and boards to the opposite end of her baby's body, only with considerably less

excuse ; for a distorted head apparently less affects health and comfort than cramped and misshapen feet, and was also esteemed of more vital importance to preferment in Chinook society. Any one who recollects the boots of the late Lord Palmerston will be reminded that a wide expanse of shoe leather is in this country, even during the prevalence of an opposite fashion, quite compatible with the attainment of the highest political and social eminence.

No sensible person can really suppose that there is anything in itself ugly, or even unsightly, in the form of a perfect human foot ; and yet all attempts to construct shoes upon its model are constantly met with the objection that something extremely inelegant must be the result. It will perhaps be a form to which the eye is not quite accustomed ; but there is no more trite observation than the arbitrary nature of fashion in her dealings with our outward appearance, and we all know how anything which has received

her sanction is for the time considered elegant and tasteful, though a few years later it may come to be looked upon as positively ridiculous. That our eye would soon get used to admire a different shape may be easily proved by any one who will for a short time wear shoes constructed upon a more correct principle, when the prevailing pointed shoes, suggestive of cramped and atrophied toes, become positively painful to look upon.

A glance at a series of pictures of costume at various periods of English history will show how fashion has changed at different times with respect to the coverings of the feet. The fact that the excessively pointed elongated toes of the time of Richard II., for instance, were superseded by the broad, round toed, almost elephantine, but most comfortable shoes seen in the portraits of Henry VIII. and his contemporaries, shows that there is nothing in the former essential to the gratification of the æsthetic instincts of mankind.

Each form was doubtless equally admired in the time of its prevalence.

It is not only leathern boots and shoes that are to blame for producing alterations in the form of the feet; even the stocking, comparatively soft and pliable as it is, when made with pointed toes and similar form for both sides, must take its share. The continual, steady, though gentle pressure, keeps the toes squeezed together, and especially hinders the recovery of its proper form and mobility, when attempts at curing a misshapen foot are being made by wearing shoes of rational construction. Socks adapted to the different form of the two feet, or "rights and lefts," are occasionally to be met with at hosiers, and it would add greatly to comfort if they were more generally adopted. For some cases it is well to have them made with distinct toes like gloves. With such socks and properly constructed shoes, a much distorted foot, even of a middle aged person, will

recover its power and freedom of motion to a considerable extent.

Only one thing is needed to aggravate the evil effect of a pointed toe, and that is the absurdly

FIG. 19.—Modern Parisian Shoe, copied from an advertisement in the *Queen* Newspaper. The nearest European representative of the Chinese deformity depicted in Fig. 15, p. 62.

high and narrow heel so often seen now on ladies' boots, which throws the whole foot, and in fact the whole body, into an unnatural position in walking, produces diseases well known to all surgeons in large practice, and makes the nearest approach

yet effected by any European nation to the Chinese custom which we generally speak of with surprise and reprobation. And yet this fashion appears just now on the increase among people who boast of the highest civilisation to which the world has yet attained.

The practice of turning out the toes, so much insisted on by dancing masters, when it becomes habitual, is a deformity. Although in standing in an easy position the whole limb may be rotated outwards from the hip, so as to give a broader basis of support, in walking or running the hip, knee, ankle, and joints of the foot are simple hinges, and it is essential for the proper co-ordination of their actions that they should all work in the same plane, which can only be the case when the toes are pointed directly forward, and the feet nearly parallel to one another. Any deviation from this position must interfere with the true action of the foot when

raising and propelling the body, as explained at p. 69. Turning out the toes is, moreover, a common cause of weak ankles, as it throws the weight of the body chiefly on the inside, instead of distributing it equally over all parts of the joint.

I must speak lastly of one of the most remarkable of all the artificial deformities produced by adherence to a conventional standard, in defiance of the dictates of nature and reason.

Of all parts of the body, the elastic and mobile walls of the chest would seem most to need preservation from external constriction, if they are to perform efficiently the important purposes for which their peculiar structure is specially designed. The skull is a solid case, with tolerably uniform walls, the capacity of which remains the same, whatever alteration is made in its shape. Pressure on one part is compensated for by dilatation elsewhere; the body is not so, it may be

compared to a cylinder with a fixed length, determined by the vertebral column, and closed above and below by a framework of bone. Circular compression then must actually diminish the area which has to be occupied by some of the most important vital organs. Moreover, the framework of the chest is a most admirable and complex arrangement of numerous pieces of solid bone and elastic cartilage, jointed together in such a manner as to allow of expansion and contraction for the purposes of respiration—expansion and contraction which, if a function so essential to the preservation of life and health is to be performed in an efficient manner, should be perfectly free and capable of variation under different circumstances. So, indeed, it has been allowed to be in all parts of the world and in all ages, with one exception. It was reserved for mediæval civilised Europe to have invented the system of squeezing together, rendering immobile,

and actually deforming, the most important part of the human frame; and the custom has been handed

FIG. 20.
Torso of the Statue of Venus of Milo.

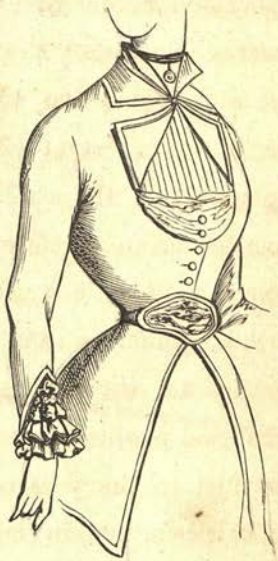

FIG. 21.
Paris Fashion, May 1880.

down to, and flourishes in, our day, notwithstanding all our professed admiration for the models of classical antiquity, and our awakened attention to the laws of health.

It is only necessary to compare these two figures (Figs. 20 and 21)—one acknowledged by all the artistic and anatomical world to be a perfect example of the natural female form,—to be convinced of the gravity of the structural changes that must have taken place in such a form before it could be reduced so far as to occupy the space shown in the second figure, an exact copy of one of the models now held up for imitation in the fashionable world. The actual changes that have taken place in the bony framework of the chest are seen by comparing the two figures on the next page, the one showing the normal form, the other the result of long continued tight-lacing. The alterations in the shape and position of the organs within need not be dwelt upon here; they and the evil effects arising from them are abundantly discussed in medical works. When it is considered that the organs which are affected are those by which

the important functions of respiration, circulation, and digestion are carried on, as well as those essential to the proper development and healthy

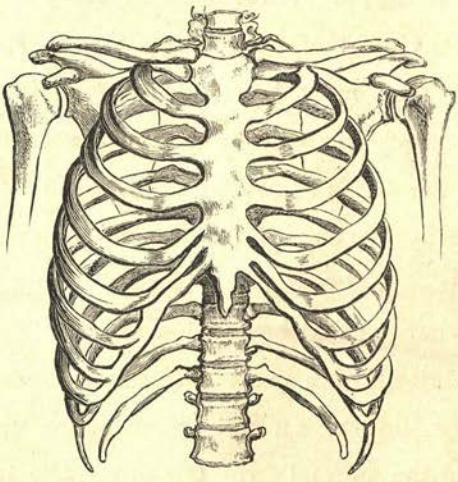

FIG. 22.—Normal form of the Skeleton of the Chest.

growth of future generations, it is no wonder that people suffer who have reduced themselves to live under such conditions.[1]

1 See, among many others, the section headed *Improprieties of Dress*, in Dr. Gaillard Thomas's *Practical Treatise on the Diseases*

The true form of the human body is familiar to us, as just said, from classic models; it is

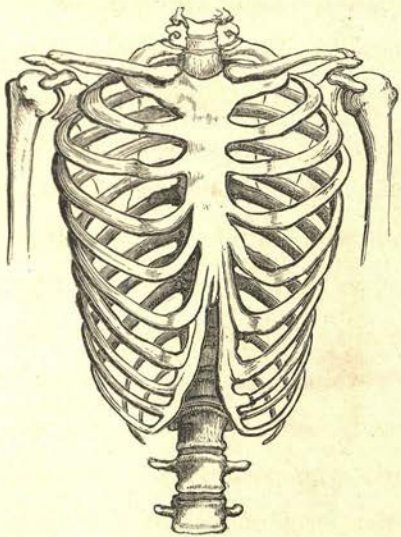

FIG. 23.—Skeleton of the Chest of a Woman, twenty-three years of age, deformed by tight-lacing, from Rüdinger's *Anatomie des Menschen*. By no means an extreme case.

familiar from the works of our greatest modern artists which adorn the Academy walls. It is,

of Women (5th Edit., 1881, p. 45), for convincing proofs (not mere general declamation) of the ill effects arising from tight-lacing.

however, quite possible, or even probable, that some of us may think the present fashionable shape the more beautiful of the two. In such case it would be well to pause to consider whether we are sure that our judgment is sound on the subject. Let us remember that to the Australian the nose-peg is an admired ornament; that to the Thlinkeet, the Botocudo, and the Bongo negro, the lip dragged down by the heavy plug, and the ears distended by huge discs of wood, are things of beauty; that the Malay prefers teeth that are black to those of the most pearly whiteness; that the Native American despises the form of a head not flattened down like a pancake, or elongated like a sugar-loaf; and then let us carefully ask ourselves whether we are sure that in leaving nature as a standard of the beautiful, and adopting a purely conventional one, we are not falling into an error exactly similar to that of all these people whose tastes we are so ready to condemn.

The fact is, that in admiring such distorted forms as the constricted waist and symmetrically pointed foot, we are opposing our judgment to that of the Maker of our bodies; we are neglecting the criterion afforded by nature; we are departing from the highest standard of classical antiquity; we are simply putting ourselves on a level in point of taste with those Australians, Botocudos, and Negroes. We are taking fashion, and nothing better, higher, or truer, for our guide; and after the various examples which have now been brought forward, may we not well ask, with Shakespeare,

"SEEST THOU NOT, WHAT A DEFORMED THIEF
THIS FASHION IS?"

Printed by R. & R. CLARK, *Edinburgh.*

NATURE SERIES.

THE SPECTROSCOPE AND ITS APPLICATIONS. By J. N. LOCKYER, F.R.S. With Illustrations. Second Edition. Crown 8vo. 3*s.* 6*d.*

THE ORIGIN AND METAMORPHOSES OF INSECTS. By Sir JOHN LUBBOCK, M.P., F.R.S. With Illustrations. Second Edition. Crown 8vo. 3*s.* 6*d.*

THE TRANSIT OF VENUS. By G. FORBES, B.A., Professor of Natural Philosophy in the Andersonian University, Glasgow. With numerous Illustrations. Crown 8vo. 3*s.* 6*d.*

THE COMMON FROG. By ST. GEORGE MIVART, F.R.S. Illustrated. Crown 8vo. 3*s.* 6*d.*

POLARISATION OF LIGHT. By W. SPOTTISWOODE, LL.D., President of the Royal Society. Illustrated. Third Edition. Crown 8vo. 3*s.* 6*d.*

ON BRITISH WILD FLOWERS CONSIDERED IN RELATION TO INSECTS. By Sir JOHN LUBBOCK, M.P., F.R.S. Illustrated. Second Edition. Crown 8vo. 4*s.* 6*d.*

THE SCIENCE OF WEIGHING AND MEASURING. By H. W. CHISHOLM, Warden of the Standards. Illustrated. Crown 8vo. 4*s.* 6*d.*

HOW TO DRAW A STRAIGHT LINE; A Lecture on Linkages. By A. B. KEMPE, B.A. Illustrated. Crown 8vo. 1*s.* 6*d.*

LIGHT: A Series of Simple, Entertaining, and Useful Experiments in the Phenomena of Light, for the use of Students of every Age. By ALFRED M. MAYER and CHARLES BARNARD. With Illustrations. Crown 8vo. 2*s.* 6*d.*

SOUND: A Series of Simple, Entertaining, and Inexpensive Experiments in the Phenomena of Sound, for the use of Students of every Age. By A. M. MAYER, Professor of Physics in the Stephens Institute of Technology, &c. With Numerous Illustrations. Crown 8vo. 3*s.* 6*d.*

SEEING AND THINKING. By Prof. W. K. CLIFFORD, F.R.S. With diagrams. Crown 8vo. 3*s.* 6*d.*

DEGENERATION: A Chapter in DARWINISM. By Prof. E. RAY LANKESTER, F.R.S. Illustrated. Crown 8vo. 2*s.* 6*d.*

(*Other Volumes to follow.*)

MACMILLAN AND CO., LONDON.

By Professor HUXLEY, F.R.S.

PHYSIOGRAPHY. An Introduction to the Study of Nature. With Coloured Plates and Woodcuts. New and Cheaper Edition. Crown 8vo. *6s.*

LESSONS IN ELEMENTARY PHYSIOLOGY. With Numerous Illustrations. New Edition. Fcap. 8vo. *4s. 6d.*

ESSAYS SELECTED FROM LAY SERMONS, ADDRESSES, AND REVIEWS. Second Edition. Crown 8vo. *1s.*

ANTHROPOLOGY. An Introduction to the Study of Man and Civilisation. By E. B. TYLOR, F.R.S. With Illustrations. Crown 8vo. *7s. 6d.*

HINTS TO HOUSEWIVES ON SEVERAL POINTS, PARTICULARLY ON THE PREPARATION OF ECONOMICAL AND TASTEFUL DISHES. By MRS. FREDERICK. Crown 8vo. *2s. 6d.*

FOOD FOR THE INVALID, THE CONVALESCENT, THE DYSPEPTIC, AND THE GOUTY. By J. MILNER FOTHERGILL, M.D. Crown 8vo. *3s. 6d.*

HOUSEHOLD MANAGEMENT AND COOKERY. With an Appendix of Recipes used by the Teachers of the National School of Cookery. Compiled by request of the London School Board. By W. B. TEGETMEIER, Author of "A Manual of Domestic Economy." 18mo. *1s.*

THE SCHOOL COOKERY BOOK. Compiled and arranged by C. E. GUTHRIE WRIGHT, Hon. Sec. to the Edinburgh School of Cookery. 18mo. *1s.*

CUTTING OUT AND DRESSMAKING. From the French of Mdlle. E. GRAND'HOMME. With numerous Diagrams. 18mo. *1s.*

PRIMER OF PIANOFORTE PLAYING. By FRANKLIN TAYLOR. Edited by GEORGE GROVE. With numerous Examples. 18mo. *1s.*

GUIDE TO THE UNPROTECTED in Every-day Matters relating to Property and Income. By a BANKER'S DAUGHTER. Fifth Edition revised. Extra fcap. 8vo. *3s. 6d.*

00081202

Digitized with financial assistance from
Hemendra Kothari
on 06 November, 2019